## Renogy Monitoring Screen

# Renogy Monitoring Screen User Manual

For 12V 30/50A DC MPPT On-board Battery Chargers

## 1. Introduction

The Renogy RMS-DCDC is a high-precision monitoring screen designed specifically for Renogy DC-DC MPPT Series on-board battery chargers. This meter provides real-time tracking and feedback on your 2-battery system, ensuring you stay informed about important system information.
Engineered for an aesthetically clean and professional look, the RMS-DCDC can be flush-mounted and features a backlit LCD for clear visibility. Its intuitive 4-key input allows for easy navigation through system information, configuration of charging parameters, and identification of error codes.


Image: The Renogy RMS-DCDC Monitoring Screen, a compact device with a backlit LCD and four control buttons, designed for flush mounting.

## 2. Key Features

- **Dual Battery Monitoring:** Stay informed about the charging status of both your house and auxiliary batteries, and easily monitor the overall health of your solar system.
- **Adjustable Parameters:** Program your charger settings, including volts and amps, directly through the monitoring screen.
- **Plug and Play Connectivity:** Simply connect an RJ45 cable directly to your DC-DC charger for immediate operation.
- **Accurate Readings:** Provides precise tracking and monitoring for real-time solar and alternator charging information.

## 3. Setup and Installation

### 3.1. Connectivity

The RMS-DCDC is designed for simple plug-and-play installation. It connects directly to your Renogy DC-DC charger via an RJ45 communication cable.


Image: A close-up showing the RJ45 communication port on the Renogy DC-DC charger and the cable connecting it to the RMS-DCDC monitoring screen, illustrating the plug-and-play setup.

**Steps:**

1. Locate the RJ45 communication port on your Renogy DC-DC charger.
2. Insert one end of the RJ45 cable into the port on the charger.
3. Insert the other end of the RJ45 cable into the corresponding port on the back of the RMS-DCDC monitoring screen.
4. Ensure both connections are secure. The screen should power on automatically.

## 3.2. Flush Mount Installation

The RMS-DCDC is designed for a clean, flush-mounted appearance. Follow these steps for installation:


Image: A diagram illustrating the three steps for flush mounting the Renogy RMS-DCDC screen: 1) releasing snap-fit joints, 2) removing the front cover plate, and 3) inserting the screen into a cutout and securing it.

1. Before installation, carefully release the four snap-fit joints located on the sides of the monitoring screen.
2. Gently remove the front cover plate from the main body of the screen.
3. Prepare a cutout in your desired mounting surface that matches the dimensions of the screen's body.
4. Insert the screen's body into the cutout.
5. Reattach the front cover plate, ensuring the snap-fit joints engage securely to hold the screen in place.

## 4. Operation

The RMS-DCDC features a backlit LCD and a 4-key input system for easy navigation and parameter adjustment.

### 4.1. Navigating the Display

Use the four buttons on the screen to navigate through various display modes and settings:


Image: Four distinct LCD screens showing different monitoring parameters: Temperature (in Celsius and Fahrenheit), Kilowatts (0.0 kW, 0.0 kWh), Voltage (House and Starter battery voltage), and Current (House and Starter battery current).

- **Temperature Display:** Shows the current temperature, typically of the battery or charger environment.
- **Kilowatts Display:** Indicates power readings in kilowatts (kW) and kilowatt-hours (kWh).
- **Voltage Display:** Provides real-time voltage readings for both the house (H) and starter (S) batteries.
- **Current Display:** Shows the current (amps) flowing to or from the house (H) and starter (S) batteries.

Press the arrow buttons (**^** and **v**) to cycle through these different display screens. The enter button (↵) is typically used to confirm selections or enter settings menus, while the back button (↶) is used to return to the previous screen or exit a menu.

## 4.2. Adjusting Parameters

The screen allows for adjustment of certain charging parameters directly. This includes setting current limits and selecting battery types.

### 4.2.1. Adjustable Current Limiting

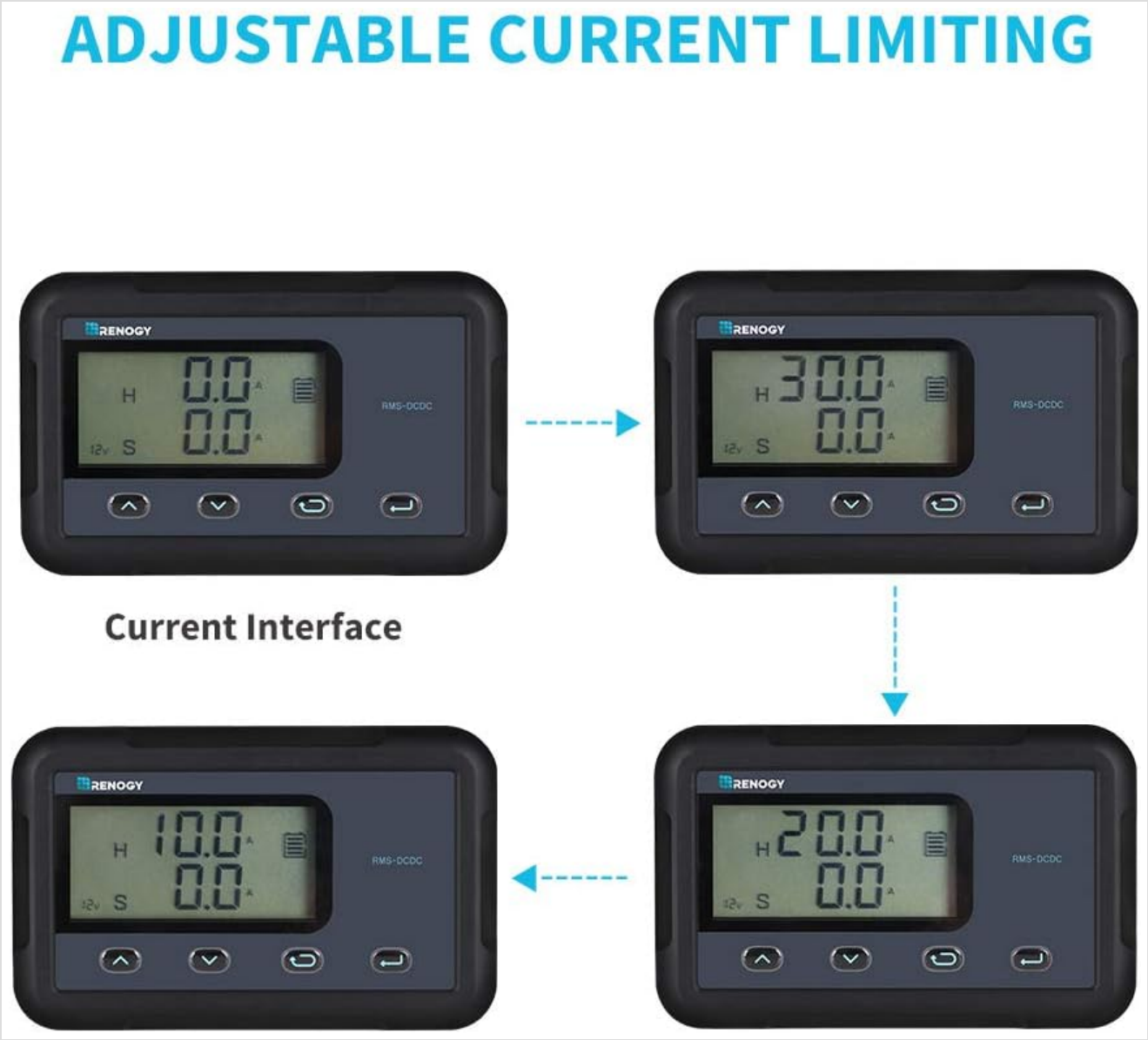


Image: A sequence of four LCD screens demonstrating how to adjust current limits. It shows starting from a current interface, then increasing the current from 0.0A to 30.0A, then decreasing to 20.0A, and finally to 10.0A.

To adjust the current limit, navigate to the current interface. Use the arrow buttons to increase or decrease the desired current value. Confirm your selection with the enter button.

### 4.2.2. Adjustable Battery Types


Image: Four LCD screens displaying different battery type selections: SLd (Sealed), GEL, FLd (Flooded), and USr (User-defined).

The screen allows you to select the appropriate battery type for your system, ensuring optimal charging. Options typically include Sealed (SLd), Gel (GEL), Flooded (FLd), and User-defined (USr). Navigate to the battery type setting and select the type that matches your house battery.

**Important Note:**

- This remote control screen is primarily applicable to situations where the life battery (house battery) is a **NON-LITHIUM** battery.
- It is also designed for use with a **smart generator**.

## 5. Maintenance

To ensure the longevity and optimal performance of your Renogy Monitoring Screen, follow these simple maintenance guidelines:

- **Cleaning:** Gently wipe the screen and casing with a soft, dry cloth. Avoid using abrasive cleaners, solvents, or excessive moisture, as these can damage the display or internal components.
- **Connection Check:** Periodically inspect the RJ45 communication cable and its connections to ensure they are secure and free from corrosion or damage. A loose connection can lead to inaccurate readings or loss of functionality.
- **Environmental Conditions:** Ensure the screen is installed in an environment within its specified operating

temperature and humidity ranges. Avoid prolonged exposure to direct sunlight or extreme temperatures.

## 6. Troubleshooting

This section provides solutions to common issues you might encounter with your Renogy Monitoring Screen.

### 6.1. Error Codes

The RMS-DCDC provides comprehensive protection and can display error codes to indicate system issues. When an error occurs, an error code (e.g., "E1") will appear on the screen.


Image: The Renogy RMS-DCDC screen displaying an "E1" error code, indicating a system issue, with the screen connected to a Renogy DC-DC charger.

Refer to your Renogy DC-DC charger's main user manual for a complete list of error codes and their corresponding troubleshooting steps. Common error codes often relate to over-voltage, under-voltage, over-current, or temperature issues.

### 6.2. Common Issues and Solutions

- **Screen Not Powering On:**
    - Ensure the RJ45 cable is securely connected to both the monitoring screen and the DC-DC charger.

    - Verify that the DC-DC charger itself is powered and functioning correctly.
    - Check for any visible damage to the RJ45 cable.
- **Inaccurate Readings:**
    - Confirm that the correct battery type is selected in the screen's settings (Sealed, Gel, Flooded, User).
    - Ensure all system connections to the DC-DC charger are tight and free of corrosion.
- **Display Logic Not Supported (as per product description):**
    - Note that certain advanced display logic mentioned in general manuals (e.g., page 18 of a general manual) may not be supported by this specific RMS-DCDC product. This is a product limitation, not a fault.
- **Incompatibility with Renogy Communication Hub (BT-2):**
    - The RMS-DCDC screen is designed to be directly plugged into the DC-DC charger. It is not compatible with or intended to be used in conjunction with the Renogy Communication Hub (e.g., BT-2 Bluetooth module). If you require remote monitoring via an app, consider alternative Renogy solutions that support the communication hub.

## 7. Specifications

Below are the technical specifications for the Renogy Monitoring Screen (RMS-DCDC):

| Attribute | Value |
|---|---|
| Product Dimensions | 2.76 x 4.33 x 1.25 inches |
| Item Weight | 2.24 ounces |
| Manufacturer | Renogy |
| ASIN | B08WYRNJRH |
| Item Model Number | Monitoring Screen |
| Brand | Renogy |
| Color | Flush-mount with Backlit LCD, Real-time Tracking |
| Output Voltage | 12 Volts (DC) |
| Specification Met | FCC |

## 8. Warranty and Support

Renogy stands behind the quality of its products. For detailed warranty information and customer support, please refer to the official Renogy resources.

- **Official User Manual:** For comprehensive details and additional information, you can download the official user manual in PDF format: Renogy Monitoring Screen User Manual (PDF).
- **Renogy Brand Store:** Explore other Renogy products and find more support resources by visiting the official Renogy store: Renogy Solar Store.
- **Customer Service:** For technical assistance, warranty claims, or any other inquiries, please contact Renogy

customer service through their official website or the contact information provided in the product packaging.